A STUDY TO DETERMINE THE EFFECTIVENESS OF TAI CHI THERAPY ON BIOPHYSIOLOGICAL STATUS, DEPRESSION, SLEEP QUALITY AND QUALITY OF LIFE AMONG ELDERLY, RESIDING AT SELECTED AREAS OF LUDHIANA, PUNJAB .

A

SYNOPSIS

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NURSING

SUPERVISED BY:
Dr.Priyanka Chaudhary
Associate Professor
Ph.D (Nursing)
Desh Bhagat University,
Mandi Gobind Garh.

SUBMITTED BY:
Margreat Andrias
Roll No: 19380176008
Adm No: 19RCPHDUN008
Desh Bhagat University,
Mandi Gobind Garh.

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SYNOPSIS FOR REGISTRATION OF TOPIC FOR PH.D, THESIS

STATEMENT OF PROBLEM	**A study to determine the effectiveness of Tai Chi therapy on bio physiological status, depression, sleep quality and quality of life among elderly, residing at selected areas of Ludhiana, Punjab.**
SUPERVISOR NAME WITH ADDRESS	**Dr.Priyanka Chaudhary** **Ph.D,M.Sc.,MSN** **Desh Bhagat University,** **Mandi Gobind Garh.**
CANDIDATE NAME WITH ADDRESS	**Margreat Andrias** **Ph.D Scholar (Nursing)** **CMC, Ludhiana, Punjab.** **Contact No:9988004866** **Email id: andriasmargreat156@gmail.com**
REGISTRATION NO	**19RCPHDNU008**

DECLARATION

I, Margreat Andrias, hereby affirm that the work presented in the synopsis entitled "A STUDY TO DETERMINE THE EFFECTIVENESS OF TAI CHI THERAPY ON BIOPHYSIOLOGICAL STATUS, DEPRESSION, SLEEP QUALITY AND QUALITY OF LIFE AMONG ELDERLY, RESIDING AT SELECTED AREAS OF LUDHIANA, PUNJAB".is bonafide and genuine research work carried out by me under the Guidance of Dr. Priyanka Chaudhary ,Associate professor Faculty of Nursing Desh Bhagat University Mandi Gobindgarh.

Signature of the Candidate:

Margreat Andrias

PhD Scholar

Signature of the Supervisor:

Dr. Priyanka Chaudhary

Ph.D,M.Sc,MSN

Associate professor

Date:

Place: Desh Bhagat University

Mandi Gobindgarh

BACK GROUND OF THE STUDY

Introduction

Age is an important determinant of mental health “Old age”, the very word brings to mind grey hair, stooped shoulders, an uncertain gait and certain isolation. The whole life cycle of human existence has been divided into four distinctive but successive stages. They are juvenile age, young age, middle age and old age. Chronological age cannot be define physical and Mental abilities. The human being is the product of his genetic heritage as well as his past and present environment, including the injuries, stresses, fatigues, nutritional imbalance and emotional trauma associated with them. Aging is universal process [1].

Aging is a normal process not a disease. An increases in longevity and decline in fertility have contributed to people living much longer today than ever before in the last 50 years (WHO, 1998). The energetic and joyful childhood, the warm and vigorous youth, middle age of maturity and ripeness and at last the old age when one’s physical strength begins to leave him and youthful vitality starts yielding to a sense of despair. The teeth start falling, the hair turns grey, skin becomes wrinkled, vision becomes poorer, ears need hearing aid and there is a decrease in muscle strength. This is the time when many elderly people becomes three legged, the third leg being the stick. It is from here that the problems of old people start arising (Sinha, 2009)[2].

Also old people have limited regenerative abilities and are more prone to diseases, syndromes, and sickness as compared to other adults. The number of older persons has tripled over the last 50 years; it will more than triple again over the next 50 years. By 2050, 1 in every 3 persons living in the more developed regions is likely to be 60 or older and about 1 in every 4 is projected to be 65 or older. In the less developed regions, nearly 1 in every 5 is projected to be over 60, while 1 in every 7 is projected to be over 65. By 2050, nearly four fifths of the world’s older population will be living in the less developed regions (Population Division, United Nations) [3].

The aging is the biggest challenges facing the world in the next century. The universal phenomena cannot stop for it is inevitable. The elderly population is growing much faster than the population as a whole. Due to increased health facilities, life standard and other socioeconomic factors average life expectancy has gone up considerably

which resulted in sharp increase in elderly population. Depression decreases an individual's quality of life and increases dependence on others. **Sengupta and Benjamin (2015)** conducted a cross-sectional study to assess the prevalence of depression and result was significantly higher both in those with functional impairment as well as in those with cognitive impairment [4].

Freitas (2013) identified that the Chronic Non Communicable Diseases may result in losses in the overall health and functionality of the elderly, negatively affecting their quality of life, including the standard and quality of sleep [5]**.**

The WHO defines the concept of quality of life as 'individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns'. Quality of life is a multidimensional and multilevel concept. Old age people can leave a dignified and quality of life [6].

There is growing evidence that this mind-body practice, which originated in China as a martial art, has value in treating many health problems. Tai chi is an ancient Chinese tradition that, today, is practiced as a graceful form of exercise. It involves a series of movements performed in a slow, focused manner and accompanied by deep breathing, moreover is a non-competitive, self-paced system of gentle physical exercise and stretching. Each posture flows into the next without pause, ensuring that the body is in constant motion.Tai chi effects on depression have recently been researched in the form of a survey and a couple Meta analyses. Tai Chi is an ancient Chinese martial art that does not require any special equipment or setting. Tai Chi activates the whole body using balanced movements without causing undue stress [7].

STATEMENT OF PROBLEM

A study to determine the effectiveness of Tai Chi therapy on bio physiological status, depression, sleep quality and quality of life among elderly, residing at selected areas of Ludhiana, Punjab.

REVIEW OF LITERATURE

Review of literature divided into five parts:

I. Review of literature related to problems Faced by Elderly.
II. Review of literature related to depression among Elderly.
III. Review of literature related to sleep quality among Elderly.
IV. Review of literature related to quality of Life among Elderly.
V. Review of literature related to effectiveness of Tai Chi Therapy.

I. Review of literature related to problems Faced by Elderly.

Ali. M. A. Z. (2014),conducted on the adjustment problems of oldest people. Author has stated that there is a need for preserving the Indian joint family system. There should be mutual cooperation and understanding between new and old generations.Through the study author has focused on the emotional adjustment, social adjustment and marital adjustment of oldest people [8].

Barua *et al.*, (2011) evaluated the median prevalence rates of depression in elderly population of India and compared the same with the rest of the world. The median prevalence rate of depression among elderly was reported to be 18.2%, which was significantly higher than the rest of the world (5.4%) [9].

Hemavathi U. & Rani. B. S , (2014),conducted a study on the problems faced by old age people based on age, gender and types of stay, that his institution and non-institution of in Andhra Pradesh. Results were the majority of old age people who admitted in institution where from nuclear families. Institutionalised old age are facing many social problems [10].

Alen.D.Kaye (2010) identified that the prevalence of persistent pain increases with age, increases in joint pain and neuralgias are particularly common and a majority of elderly persons have significant pain problems that are left untreated [11].

A cross-sectional study was conducted to determine the prevalence of chronic pain in elderly employees in Londrina, Paraná State, Brazil, and to characterize the pain in relation to: location, intensity, duration of episode, periodicity, and most frequent time of day. The study showed a high prevalence of chronic pain in

the elderly, with characteristics that can interfere in their quality of life, causing unnecessary suffering [12].

Stone.K.L.(2014) identified that inadequate sleep is associated with significant morbidity and mortality in older adults. In addition, older adults who suffer from sleep problems have balance, ambulatory and vision difficulties, even after adjusting for medication use. All of these difficulties result in an increased risk of falling [13].

Jalal (2014) conducted a systematic review of 9 Randomized Control Trials (RCT's) on effectiveness of Tai Chi therapy on psychological and physiological health thus exploring the quantitative evidence for Tai Chi practice on sleep quality among elderly population. with physical disorder including fibromyalgia, cerebro vascular disorder and heart failure. The review findings also revealed that Tai Chi may be more likely to promote healthy sleep, compared to receiving health education, doing daily stretches, or doing low impact exercise [14].

Need for the Study

Mahapatra (2010) states that ageing is a normal inevitable and universal phenomenon; literally it refers to the effects of age, commonly speaking, it means the various effects or manifestation of old age. In this sense it refers to various deterioration in the organism population ageing will be the major driver of projected increase in disease .Again this segment of population faces multiple medical and psychological problems. Many families are incapable of taking adequate care of older people. The future generations should continue to care for the elderly to prevent them from facing isolation and loneliness in this fast paced society. Many people and their families grapple with the difficult and unprecedented questions of care in old age. There is an emerging need to pay greater attention to ageing-related issues and to promote holistic policies and programmes for dealing with the ageing in society.

With a history of over 5000 years, Tai Chi is an integral part of China's traditional cultural heritage and its origin dates back to the Ming Dynasty. Tai Chi, the highest form of martial arts is a combination of physical exercise, breathing techniques and meditation; it's slow, relaxed flowing movements of

opening and closing forms, advance and retreat, attack and defence, channelizes energy and the body's natural movements to attain a high degree of fitness, both mental and physical. When incorporated into lifestyle, it exercises the body, cultivates personality and refreshes the mind. Elderly, especially those residing at old age homes often suffer from pain, depression, poor sleep quality and poor quality of life along with other chronic diseases due to various reasons. Each problem is addressed with different medications and treatment modalities which can in turn result in various side effects and complications among the vulnerable group.

A review of relevant literature showed that despite may be study have been conducted in countries and very few studies are conducted in India, but specially in Punjab, Ludhiana City there is no such type of studies is conducted yet . There seems to be a big gap between the east and west. Hence it was consider important study. Thus the researcher is interested in identification of the effectiveness and feasibility of Tai Chi therapy which is an effective method to reduce pain and depression and improve the sleep quality and quality of life among elderly in India.

Objectives:

1. To determine the effectiveness of Tai Chi therapy on biophysiological status among elderly in control and experimental group.

2. To elicit the effectiveness of Tai Chi therapy on the level of depression among elderly in control and experimental group.

3. To identify the effectiveness of Tai Chi therapy on sleep quality among elderly in control and experimental group.

4. To ascertain the effectiveness of Tai Chi therapy on quality of life among elderly in control and experimental group.

5. To find out correlation between biophysiological status and level of depression.

6. To find out correlation between level of depression and quality of sleep.

7. To find out correlation between sleep quality and quality of life.

8. To find out correlation between quality of life and biophysiological status.

9. To find out the association of biophysiological status, depression, sleep quality and quality of life with selected demographic variables.

Operational definitions:

1) **Effectiveness:** It refers to the expected result after the implementation of Tai Chi therapy on biophysiological status, depression, sleep quality and quality of life among elderly.
2) **Tai Chi Therapy:** A method in which the elderly performs a series of movements of the extremities and the body, breathing exercise and meditation in a coordinated manner.
3) **Biophysiological status:** Biophysiological parameter includes blood pressure and pain, which is measured during the pretest at day 1, and then the posttests at the end.
4) **Depression:** Depression is a mental disorder, characterized by sadness, loss of interest, feelings of guilt, disturbed sleep or appetite, feelings of tiredness, and poor concentration experienced by the elderly.
5) **Sleep quality:** It refers to the subjective expression of an elderly about their sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbance, use of sleep medications and day time dysfunction.
6) **Quality of life:** Quality of life refers to elderly perception about the physical, psychological, social and environment domain of oneself.
7) **Elderly:** It refers to the Males and females in the age group of 60 to 80 years, residing at the selected areas of Ludhiana, Punjab.

Scope

The scope of the present study is to focus on the effectiveness Tai Chi therapy on bio physiological status, depression, sleep quality and quality of life among elderly, which can further reduce the risk of side effects of drugs, prevent level

of depression and improves the quality of life .Tai chi enhances sense of wellbeing among old age people in the society.

Delimitation of the study

The present study will be limited to old age people

- who will be residing in selected areas of Ludhiana.
- who will be interested for participation.
- Who will not be present at the time of study.

Hypothesis

H1: There will be a significant difference in systolic blood pressure between the elderly who practice Tai Chi therapy and those who do not.

H2: There will be a significant difference in diastolic blood pressure between the elderly who practice Tai Chi therapy and those who do not.

H3: There will be a significant difference in pain score between the elderly who practice Tai Chi therapy and those who do not.

H4: There will be a significant difference in depression between the elderly who practice Tai Chi therapy and those who do not.

H5: There will be a significant difference in quality of life between the elderly who practice Tai Chi therapy and those who do not.

H6: There will be a significant difference in quality of life between the elderly who practice Tai Chi therapy and those who do not.

H7: There will be association between biophysiological status, depression, sleep quality and quality of life with their selected demographic variables.

H0: There will be no association between biophysiological status, depression, sleep quality and quality of life with their selected demographic variables.

Research Design: Quantitative quasi experimental research with evaluative approach.

Methodology

Research Methodology is a way to solve the problem systematically. It is a procedure in which the researcher starts with initial identification of the problem to final conclusion.Methododology of research organizes all the

component of the study in a way that is most likely to lead a valid answer to the problems that have been posed.

Area of the study

The Study will be conducted in selected area of Ludhiana, Punjab.

Sample Size

The Sample size for the present study will be 600 old age people (300 in control group and 300 in experimental group) residing in selected areas of Ludhiana, Punjab.

Sample technique

Non-Probability Convenient sampling technique will be used to select the sample.

Variables

Independent Variable: The independent variable in this study will be Tai Chi therapy.

Dependent Variable: The dependent variables in this study will be biophysiological status, depression, sleep quality and quality of life of the elderly.

Inclusion /Exclusion Criteria

Inclusion Criteria: Inclusion criteria of the present study who will be

1. willing to participate in the study.

2.old age people between age group of (60-80 years).

Exclusion Criteria: The present study exclude the old age people who are:

1. not present at the time of data collection.
2. not willing to participate.

Description of Tool

Section I – Demographic variables.

Section II-Bio physiological status assessment tool.

Section III- Geriatric Depression Scale.

Section IV- Pittsburgh Sleep Quality Index (PSQI)

Section V- W.H.O Quality of life – BREF Scale.

Measurement and scaling

Reliability of the tool will be selected by test and retest method, split half method, Karl Pearson's coefficient formula.

Data Processing

The data will be collected from elderly person from selected areas of Ludhiana Punjab. Prior to data collection procedure the formal procedure will be obtained from the concerned authorities.

Analysis and estimation

Analysis and interpretation of the data will be done by using Descriptive and inferential statistics and it will be presented in the form of tables, charts, graphs and diagrams.

Expected Outcome

Elderly people have some degree of problems due to aging and Tai chi exercise improves their health condition.

Relevance of Expected Results: relevance will be supported with accurate reviews of literature.

Tentative Chapter Plan

- Chapter 1: Introduction
- Chapter 2: Review of Literature
- Chapter 3: Methodology
- Chapter 4: Analysis and interpretation of data
- Chapter 5: Discussion
- Chapter 6: Conclusion, Implication and Recommendations.

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